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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,463	04/19/2001	Wadood Hamad	IP-6084	2092

23566 7590 04/11/2003

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EXAMINER
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ALVO, MARC S

ART UNIT	PAPER NUMBER
1731	10

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/838,463	HAMAD ET AL.
Examiner	Art Unit	
Steve Alvo	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(h).

## Status

1)  Responsive to communication(s) filed on 22 October 2002.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 10-24 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 10-15 and 17-23 is/are rejected.

7)  Claim(s) 16 and 24 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.  
4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

The Final Rejection of March 17, 2003 is withdrawn. A copy of the first Office Action was mistakenly mailed as a Final. The following action is in response to October 22, 2002 and March 17, 2003 responses.

Claims 16 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 11, 13-15, 17, 19, 20 and 23 are rejected under 35 U.S.C. 103(a) as obvious over CHASE '403 in view of SETH et al (1975 article) or SETH et al (1993 article) or SETH.

CHASE '403 teaches using empirical methods and techniques of regression analyses to determine functional relationships between material properties and the strength of the paper for a grade of paper (column 14, lines 29-34). The fracture toughness is directly related to the paper strength, as it is a measure of the force needed to rupture the paper. SETH et al (1975 article) or SETH et al (1993 article) or SETH teaches that fractional toughness measurements can be used to determine the strength of paper. It would have been obvious to use the paper fracture toughness of SETH et al (1975 article) or SETH ET AL (1993 article) or SETH for the paper strength measurements of CHASE '403. It would have been obvious that the regression analyses to determine functional relationships between material properties of CHASE '403 could be related the fracture toughness of SETH et al (1975 article) or SETH ET AL (1993 article) or

SETH as the fracture toughness is a measure of the paper strength. See Figure 1 of CHASE '403 for using caliper, basis weight, moisture (humidity), additives (column 9, line 35) and softwood ratio as the variables of CHASE '403. See CHASE '403 for monitoring the variables after a grade is identified and then providing output signals to control the strength or the fracture toughness of SETH et al (1975 article) or SETH ET AL (1993 article) or SETH.

Claims 12, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHASE '403 in view of SETH et al (1975 article) or SETH ET AL (1993 article) or SETH as applied to claim 10 above, and further in view of HART.

HART teaches automatic control of a paper machine and teaches using many of the same measurements used by CHASE '403, e.g. basis weight, caliper, moisture, and additives (82), (83) and (84) including filler (alum). It would have been obvious to the routineer that alum (filler) could have been one of the additives measured by CHASE '403 in the manner taught by HART.

The argument that there is no motivation to combine the references is not convincing as CHASE '403, of SETH et al (1975 article), SETH ET AL (1993 article) and SETH are all concerned with determining the strength of paper. As set forth above, the fracture toughness is directly related to the paper strength, as it is a measure of the force needed to rupture the paper. SETH et al (1975 article) or SETH et al (1993 article) or SETH teaches that fractional toughness measurements can be used to determine the strength of paper. It would have been obvious to use the paper fracture toughness of SETH et al (1975 article) or SETH ET AL (1993 article) or SETH for the paper strength measurements of CHASE '403.

The argument that regression analysis of CHASE, drawn to Mullen burst strength, would not apply to fracture toughness is not convincing as one of ordinary skill in the control art

would recognize that any conventional control technique could be used to control the processes of SETH et al (1975 article), SETH ET AL (1993 article) and SETH. Regression analysis is a well known control technique and it would be expected to provide control in other paper making processes than those of CHASE '403, e.g. it would have been *prima facie* obvious to use regression analysis on the fracture toughness control of SETH et al (1975 article), SETH ET AL (1993 article) and SETH.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the **primary examiner** should be directed to **Steve Alvo** whose telephone number is **(703) 308-2048**. The Examiner can normally be reached on Monday - Friday from **6:00 AM - 2:30 PM (EST)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stanley Silverman, can be reached on 703-308-3837.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Group receptionist** whose telephone number is **(703) 308-0661**.

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MSA  
4/10/03



**STEVE ALVO**  
**PRIMARY EXAMINER**  
**ART UNIT 1731**